

Illinois Commerce Commission
Assessment of Mt. Carmel Public Utility Company's
Reliability Report and Reliability Performance
for Calendar Year 2002

Pursuant to 83 Ill. Adm. Code 411.140

August 13, 2003

1. Executive Summary

Pursuant to Section 16-125 of the Illinois Public Utilities Act and the Commission's electric reliability rules in 83 Illinois Administrative Code, Part 411, Mt. Carmel Public Utility Company (Mt. Carmel) filed its annual electric reliability report for calendar year 2002 on June 2, 2003. It filed an amendment to its report on July 14, 2003. This document details Staff's assessment of Mt. Carmel's reliability report and Staff's evaluation of Mt. Carmel's reliability performance for calendar year 2002.

Mt. Carmel's reported company-wide average interruption frequency index (SAIFI) for 2002 was the highest (worst) of the nine reporting Illinois utilities. Mt. Carmel's reported company-wide average duration of customer interruptions (CAIDI) for 2002, however, was the second best of all reporting utilities. Since 2002 was the first year of reliability reporting for Mt. Carmel, it has not yet established trends of its reported reliability performance. With an overall SAIFI 82% higher than the next worst utility in 2002, Mt. Carmel has much room for improvement in the frequency of interruptions in 2003.

Mt. Carmel listed overhead equipment problems and weather as the most predominant causes of customer interruptions in 2002, causing 29% and 26%, respectively, of the total customer interruptions. Trees were reported as the cause for 11% of the interruptions.

Staff found many conflicts between trees and Mt. Carmel's circuits during field inspections in May 2003. Based primarily on the field inspections, but also on the possibility that many of the interruptions attributed to "weather" might have been tree related, Staff feels that trees are the greatest threat to service reliability on the Mt. Carmel electric system. Mt. Carmel is investigating implementing an improved tree trimming plan, involving circuit-wide trimming on a three-year schedule.

Mt. Carmel also needs to do a better job of identifying the root causes of service interruptions to better understand what actions need to be taken to improve reliability.

Photos of some of the problems found during Staff's field inspections of Mt. Carmel's circuits this year are included in Section 7 of this report, and summaries of problems noted by Staff for each circuit inspected are included as Attachments A, B, and C. Many of these problems, while not necessarily causes of interruptions in 2002, will have adverse effects on reliability and public safety in the future if not corrected. Mt. Carmel should perform field inspections of all circuits on a regular basis and correct the problems found which can significantly affect reliability or public safety.

Mt. Carmel listed numerous projects and activities the company is doing to maintain or improve reliability, summarized in Section 9 of this report.

While the above discussion covers the most significant items in a general way, a total of six specific recommendations are included in this Staff report, summarized on page 17.

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2. Introduction

Beginning with the year 1999, and at least every three years thereafter, 83 Illinois Administrative Code Part 411.140 requires the Commission to assess the annual reliability report of each jurisdictional entity and evaluate its reliability performance. Code Part 411.140 requires the Commission evaluation to:

- A) Assess the reliability report of each entity.
- B) Assess the jurisdictional entity's historical performance relative to established reliability targets.
- C) Identify trends in the jurisdictional entity's reliability performance.
- D) Evaluate the jurisdictional entity's plan to maintain or improve reliability.
- E) Include specific identification, assessment, and recommendations pertaining to any potential reliability problems and risks that the Commission has identified as a result of its evaluation.
- F) Include a review of the jurisdictional entity's implementation of its plan for the previous reporting period.

Mt. Carmel Public Utility Company (Mt. Carmel) is one of three electric utilities in Illinois that were exempted from the requirements of the Commission's electric service reliability policy (83 Ill. Adm. Code 410, Subpart C) as of December 16, 1997, and were not required to maintain records reflecting such information for any period prior to January 1, 2002. Because of that exemption, Mt. Carmel's annual reliability report for calendar year 2002 is its initial annual reliability report to the Commission.

This document assesses the annual reliability report covering calendar year 2002 filed by Mt. Carmel on June 2, 2003, (amendment filed on July 14, 2003), and evaluates Mt. Carmel's reliability performance for calendar year 2002. This report is organized to include all of the above listed requirements.

3. Mt. Carmel's 2002 Customer Base and Service Territory

As reported in its annual reliability report, Mt. Carmel Public Utility Company provided electric service to 5,923 customers in Illinois in 2002. Mt. Carmel's service territory covers approximately 107 square miles, including one incorporated municipality (the City of Mt. Carmel) and small communities and rural areas in central and northern Wabash County.

4. Mt. Carmel's Electric Distribution System

Approximately 98.5% (260.02 miles) of Mt. Carmel's electric distribution system is overhead, with the remaining 1.5% (3.94 miles) being underground. 30% of Mt. Carmel's circuit miles consist of urban distribution facilities. Mt. Carmel reported that it has two transmission substations, three distribution substations, a total of twelve distribution feeders (all 12 kV), and four industrial/wholesale substations.

Code Part 411.120(b)(3)(G) requires the utilities to report on the age of their transmission and distribution facilities. Mt. Carmel estimates the approximate average age of its transmission facilities to be 18.7 years, with an average remaining life of 11.3 years. Mt. Carmel estimates the approximate average age of its distribution facilities to be 19.98 years, with an average remaining life of 10.02 years.

5. Assessment of Mt. Carmel's 2002 Reliability Report

Mt. Carmel filed its 2002 Reliability Report on June 2, 2003, as required by Section 16-125 of the Public Utilities Act and the Commission's electric reliability rules in 83 Illinois Administrative Code, Part 411. Mt. Carmel's report is well organized, with the information sequenced to follow the pattern of Code Part 411. The Mt. Carmel report met most of the requirements of Code Part 411.120, but did not provide required age, condition, and reliability performance information for its transmission and distribution facilities, a qualitative characterization of the condition of its electric system, and information concerning the cost of each action taken or planned to improve the performance of worst performing circuits.

In response to Staff's letter describing the non-compliant items on June 25, 2003, Mt. Carmel filed an amendment to its 2002 Reliability Report on July 14, 2003. The amendment addressed all of the non-compliant items to Staff's satisfaction.

While not technically a non-compliant item, Mt. Carmel also did not indicate in its report the cause categories of the interruptions of its worst performing circuit and its plan to address those specific problems. While this information should be in the report, Staff has obtained the needed information through data requests and has requested that Mt. Carmel include such information in its future reliability reports.

6. Mt. Carmel's Historical Performance Relative to Established Reliability Targets

Code Part 411.140(b)(4)(A-C) establishes electric service reliability targets that jurisdictional entities must strive to meet. These targets specify limitations on customer interruptions as well as hours of interruption that a utility must strive not to exceed on a per customer basis. The customer service reliability targets are listed in Table 1.

Table 1
CUSTOMER SERVICE RELIABILITY TARGETS

Immediate primary source of service operation voltage	Maximum number of controllable interruptions in each of the last three consecutive years	Maximum hours of total interruption duration due to controllable interruptions in each of the last three years
69kV or above	3	9
Between 15kV & 69kV	4	12
15kV or below	6	18

In its 2002 reliability report, Mt. Carmel stated “There were no customers who experienced interruptions which meet or exceed the criteria set forth in the above section.”

7. Analysis of Mt. Carmel’s Year 2002 Reliability Performance

Table 2 shows Mt. Carmel’s company-wide reliability indices for calendar year 2002 compared to other Illinois electric utilities. This data indicates that Mt. Carmel was the least reliable electric utility in Illinois in terms of average frequency of system interruptions (SAIFI) and in average frequency of customer interruptions (CAIFI) during 2002. It also indicates that Mt. Carmel had the second best reliability of the nine reporting utilities in terms of average duration of customer interruptions (CAIDI) in 2002.

Note: The comparison of company-wide reliability indices for Illinois electric utilities should indicate relative reliability levels achieved. The reader of this report should, however, keep in mind that each Illinois electric utility has a unique electric system, a unique group of customers, and a unique method of defining, recording, and reporting the interruption data. These differences make precise utility-to-utility comparisons difficult.

Table 2
ILLINOIS UTILITY RELIABILITY INDICES
CALENDAR YEAR 2002

	SAIFI	CAIDI (minutes)	CAIFI
AmerenCIPS	1.58	113.2	2.15
AmerenUE	1.89	163.9	2.56
AmerenCILCO	1.61	224.4	2.05
ComEd	1.06	96	1.84
Illinois Power	1.15	166	1.96
MidAmerican	1.972	66.09	2.552
Interstate	0.84	104.82	2.13
Mt. Carmel	3.59	83.54	3.59
South Beloit	1.3	97.77	1.69

SAIFI: System Average Interruption Frequency Index. This represents the average interruption frequency for all customers on the electric system, including customers who had no interruptions (total customer interruptions divided by total system customers).

CAIDI: Customer Average Interruption Duration Index. This represents, for the group of customers that actually had one or more interruptions, the average interruption duration.

CAIFI: Customer Average Interruption Frequency Index. This represents the average interruption frequency for the group of customers that had interruptions. A CAIFI index much higher than SAIFI suggests that subsets of customers experienced significantly more frequent interruptions than the overall system average.

Table 3 shows a breakdown of twelve causes of sustained customer interruptions by cause category (with no exclusions), as reported by Mt Carmel for year 2002.

Mt. Carmel reported that the highest percentages of interruptions (events) in 2002 were caused by overhead equipment problems (29.43%) and weather (26.21%). Mt Carmel listed tree problems as the cause for 11.29% of the events in 2002, though many of the interruptions attributed to weather may have been tree related. It would be much more meaningful if Mt. Carmel would break the “weather” category into more specific causes, such as high wind, lightning, ice, trees, etc. It is also notable that “broken fuse link” is not listed as a cause in Table 3, but is listed as the most predominant interruption cause for Circuit 22000, Mt. Carmel’s 2002 worst performing circuit. Staff assumes that these interruptions are included in the “overhead equipment” category in Table 3. See Staff’s discussion of the “broken fuse link” interruption cause category in the discussion of Circuit 22000 following Table 4.

Table 3
TOTAL INTERRUPTIONS BREAKDOWN BY CAUSE

Interruption Cause Category	Interruptions (Events)	Percent of Interruptions
Animal Related	42	16.94%
Tree Related	28	11.29%
Employee/Contractor Personnel Errors	1	0.40%
Underground Equipment Related	1	0.40%
Transmission/Substation Equipment	2	0.81%
Weather Related	65	26.21%
Intentional	2	0.81%
Other Alternative Supplier/Utility	0	0.00%
Customer Equipment	10	4.03%
Public	5	2.02%
Overhead Equipment Related	73	29.43%
Unknown	19	7.66%
TOTAL:	248	100.00%

Mt. Carmel also provided statistics on *controllable* interruptions in 2002, categorizing only two of the 248 events (one tree related and one personnel error) as controllable. Staff

finds this claim that less than 1% of the interruptions were controllable to be absolutely inconceivable. Mt. Carmel should review its basis for categorizing so few service interruptions as controllable. Staff's opinion is that most service interruptions are controllable, and that whether or not it is cost effective to control them is a separate issue to be considered.

Code Part 411.120(b)(3)(I)&(J) requires the reporting utility to list its worst performing circuits (subsection I) and then state (subsection J) what corrective actions are planned to improve those circuits' performance. Table 4 shows the Mt. Carmel circuit with the highest reliability indices for 2002. Since Mt. Carmel is only required to list the one worst circuit in each of the three reliability categories and the same circuit was the worst in all three categories in 2002, it is the only circuit listed.

Table 4
MT. CARMEL'S CIRCUIT WITH HIGHEST SAIFI, CAIDI, & CAIFI
CALENDAR YEAR 2002

<u>AREA</u>	<u>CIRCUIT</u>	<u>SAIFI</u>	<u>CAIDI</u> (minutes)	<u>CAIFI</u>
Allendale Feeder	22000	3.82	152.70	3.82

As part of its review of Mt. Carmel's 2002 reliability, ICC Staff inspected the Allendale feeder, Mt. Carmel's reported worst performing circuit. Staff also inspected two additional "next-worst SAIFI circuits", Mt. Carmel Circuit # 2 (12000) which had a SAIFI of 1.71, a CAIFI of 1.71, and a CAIDI of 48.79 minutes; and Mt. Carmel Circuit #3 (13000) which had a SAIFI of 1.45, a CAIFI of 1.45, and a CAIDI of 30.78 minutes. Mr. Larry Horrall, Mt. Carmel's Vice president of Operations, accompanied Jim Spencer, ICC's Senior Energy Engineer, on each of these field inspections.

The field inspections allow Staff to verify that work was performed on the circuits as reported by the utilities and to see if there are any apparent reasons for the poor performance of these circuits. Staff also notes any problems with the facilities it observes which may pose a threat to future service reliability or to public safety. For example, Staff looks for poor tree trimming practices, broken poles, split crossarms, damaged electrical devices, etc. Summaries of items noted by Staff during the distribution circuit field inspection of the Mt. Carmel circuits inspected this year are included in this report as Attachments A, B, and C. *(As mentioned to Mt. Carmel when providing them with a copy of these summaries in June, the summary for each of the circuits inspected represents typical observations noted by ICC Staff during the field inspections and is not intended to represent all of the problems or potential problems that may exist on each circuit. Also, Staff's inspections are not intended to take the place of the thorough, detailed inspections that should be performed periodically by the utility company.)*

Mt. Carmel's Circuit 22000, the "Allendale Feeder", is a 12 kV circuit feeding northward out of Mt. Carmel, serving the communities of Patton, Allendale, Friendsville, Mesa Lake, and Lancaster, and a large rural area between and around these communities. In 2002 this circuit was, by far, Mt. Carmel's largest circuit in terms of line miles of rural exposure and

had the highest SAIFI, CAIFI, and CAIDI of all Mt. Carmel circuits. 83 of the 248 total interruption events (33.5%) in Mt. Carmel's service territory in 2002 occurred on this circuit. The primary causes of interruptions reported on this circuit in 2002 were broken fuse link (31.3%), overhead equipment problems (14.5%), animals (13.3%), wind & storm (13.3%), and trees (12.0%).

To reduce exposure on Circuit 22000, Mt. Carmel performed a line switching procedure in April 2003, which shifted approximately half the area serviced by this circuit to Circuit 21000. To further improve reliability, Mt. Carmel began an "extensive" tree trimming program on this circuit in May 2003.

Staff is concerned about the high percentage of interruptions of Circuit 22000 attributed to "broken fuse link". A broken fuse link is almost never the root cause of a service interruption. A fuse link is designed to be melted ("broken") by current resulting from an electrical fault created by the root cause of the interruption occurring electrically downstream of the fuse location. When this occurs, customers upstream of the melted fuse location are spared the permanent service interruption. The real cause of the service interruption is what has happened downstream of the fuse to cause it to melt. Combining the reported causes of "broken fuse link" and "unknown" for this circuit indicates that for 41% (34 of 83) of the total interruptions for this circuit, Mt. Carmel really does not know the root cause. If the causes are not known, they cannot be reasonably addressed. Mt. Carmel needs to do a much better job of identifying, recording, and reporting the real causes of service interruptions.

During the inspection of Circuit 22000 on May 13 & 14, 2003, Staff noted few structural problems considering the size of the circuit and found that most taps were fused, with protective devices well distributed throughout the circuit. Guy markers were missing and should be installed at many locations. Few animal guards have been installed. Additional lightning arresters should be installed at several locations where it is more than 0.25 mile between arresters. Trees were growing into or very close to the primary at many locations. See Attachment A for a summary of the field notes for this circuit. Figures 1 through 8 are sample photographs of problems noted on this circuit.

Figure 1
Sweet Gum Tree Contacting Circuit 22000 in Alley E. of Cherry St., Mt. Carmel

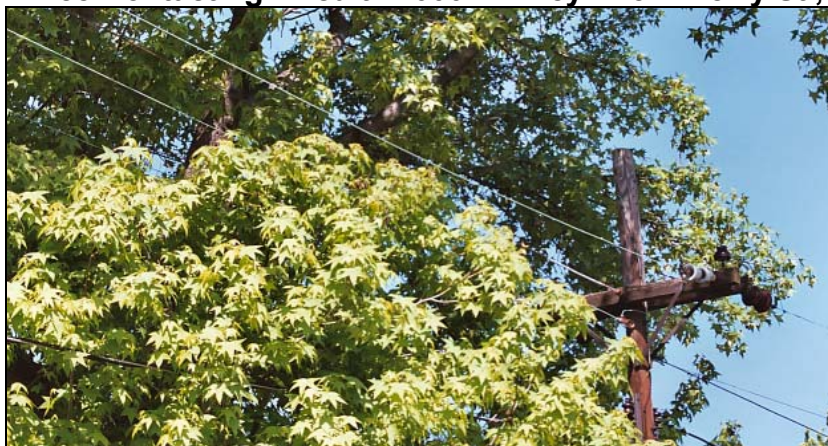


Figure 2
Pine Trees Very Close to Circuit 22000 on Highway 1, Mt. Carmel



Figure 3
Split Pole Top, Circuit 22000



Figure 4
Split & Deteriorated Crossarm, Circuit 22000



Figure 5
15 Woodpecker Holes in Pole, NW of Mesa Lake (both photos of same pole)

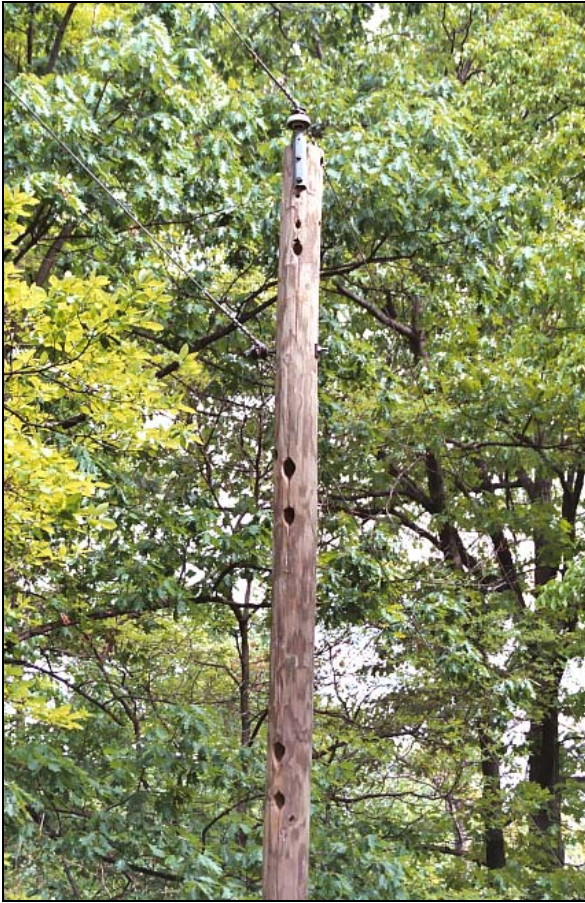


Figure 6

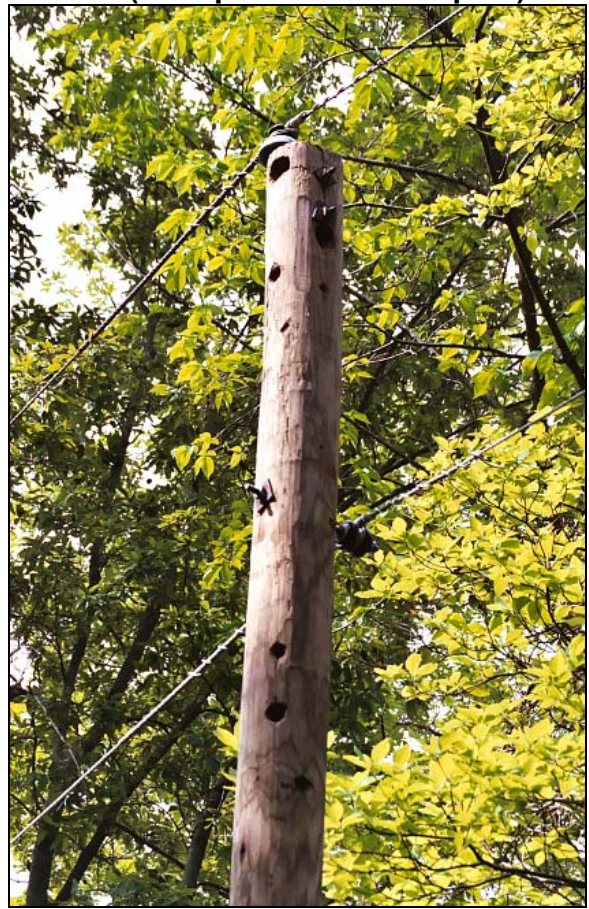


Figure 7
11(+) Woodpecker Holes in Pole, NW of Mesa Lake (both photos of same pole)



Figure 8



Mt. Carmel Circuits #2 (12000) and #3 (13000) are small 12 kV circuits confined to the eastern and southeastern portions of the City of Mt. Carmel. During the field inspection of these circuits on May 14, 2003, Staff found both circuits to be similar to each other in nearly all regards. No structural problems were noted for either circuit. All of the lateral taps were fused except for one tap in Circuit 12000. Guy markers are missing and should be installed at some locations on both circuits. Tree conflicts existed at many locations throughout both circuits. Because tree problems were present throughout most of both circuits, Staff listed only representative samples of the tree conflicts in its summary notes, Attachments B and C. Figures 9 through 14 are sample photographs of some of the tree conflicts noted on these circuits.

Figure 9 (Circuit 12000, Mt. Carmel)
Spacer Cable through Hard Maple



Figure 10
Spacer Cable through Elm Tree

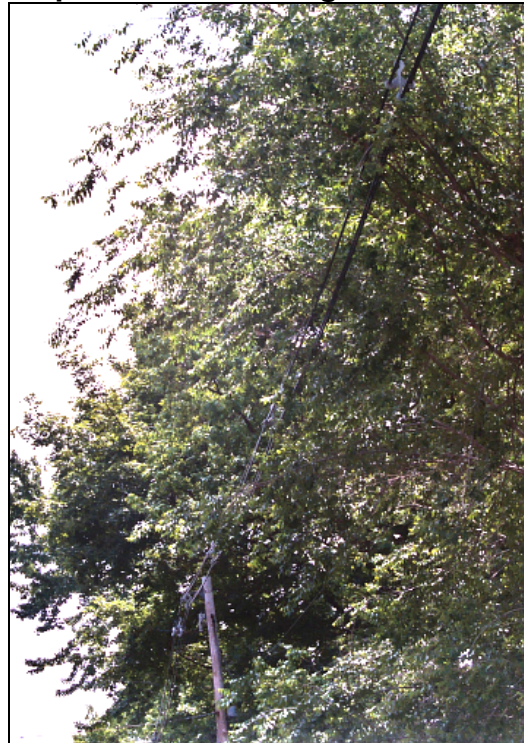


Figure 11
Spacer Cable through Maple Tree, Circuit 12000, Mt. Carmel



Figure 12
Primary through Maple Tree, Circuit 13000, Mt. Carmel



Figure 13
Single-phase Spacer Cable through Mulberry Tree, Circuit 13000, Mt. Carmel
(the primary is deflected by the tree)



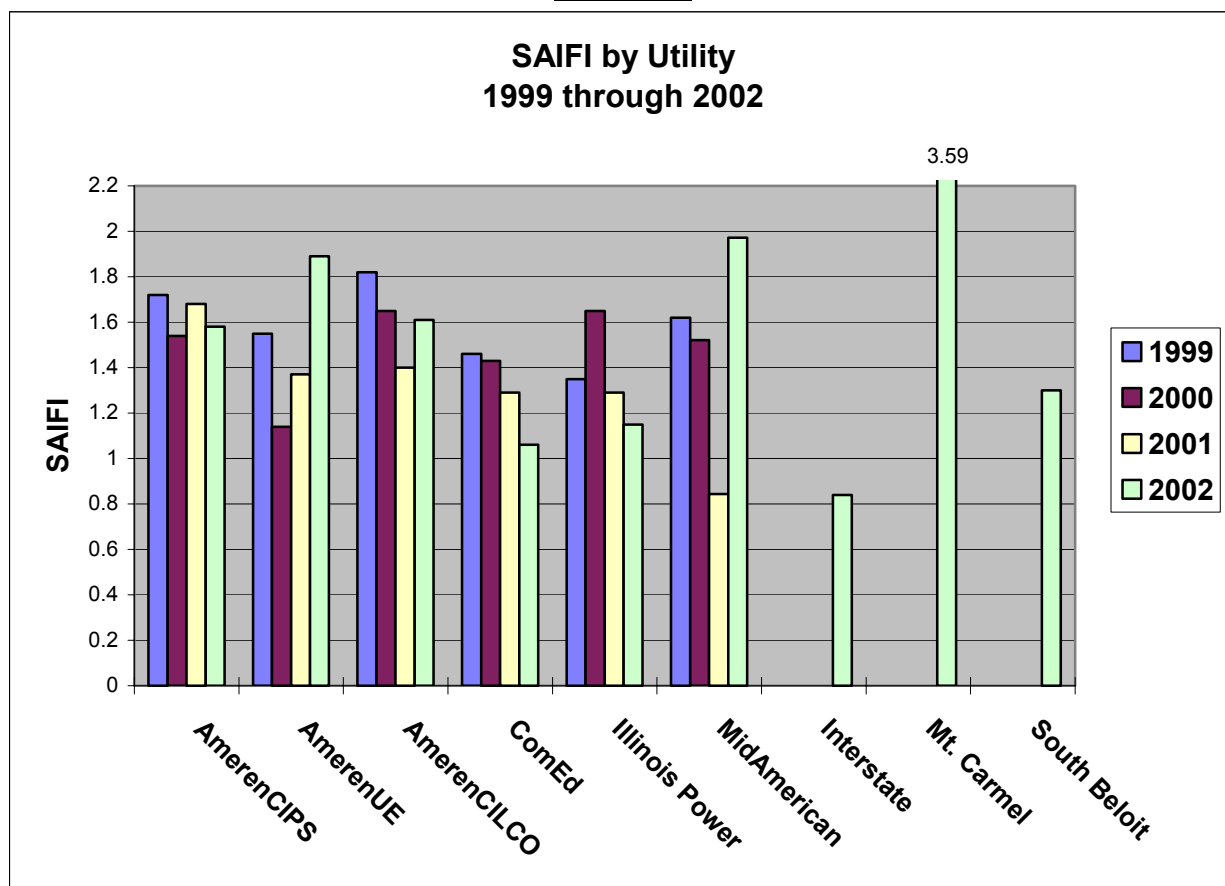
Figure 14
Single-phase Spacer Cable through Mulberry Tree, Circuit 13000, Mt. Carmel



8. Trends in Mt. Carmel's Reliability Performance

Figure 15 shows a comparison of company-wide SAIFI values reported by the Illinois utilities for years 1999 through 2002. Mt. Carmel's reported overall SAIFI performance of 3.59 for 2002 is significantly higher (worse) than any other Illinois utility has reported during this four-year time span.

Figure 15



Since 2002 was the first year of reliability reporting for Mt. Carmel, it has not yet established a trend of its own reported reliability performance. It is notable, however, that with an overall 2002 SAIFI 82% higher than that of the next worst utility, there is much room for improvement in 2003.

Figure 16 shows a comparison of SAIFI values for each company's single worst performing circuit as reported by the Illinois utilities for years 1999 through 2002. Mt. Carmel's reported worst-circuit SAIFI performance for 2002 compares very favorably with the other utilities. At 3.82, Mt. Carmel's worst-circuit SAIFI was the third best of the nine reporting utilities for 2002, bettered only by Interstate and South Beloit.

Figure 16

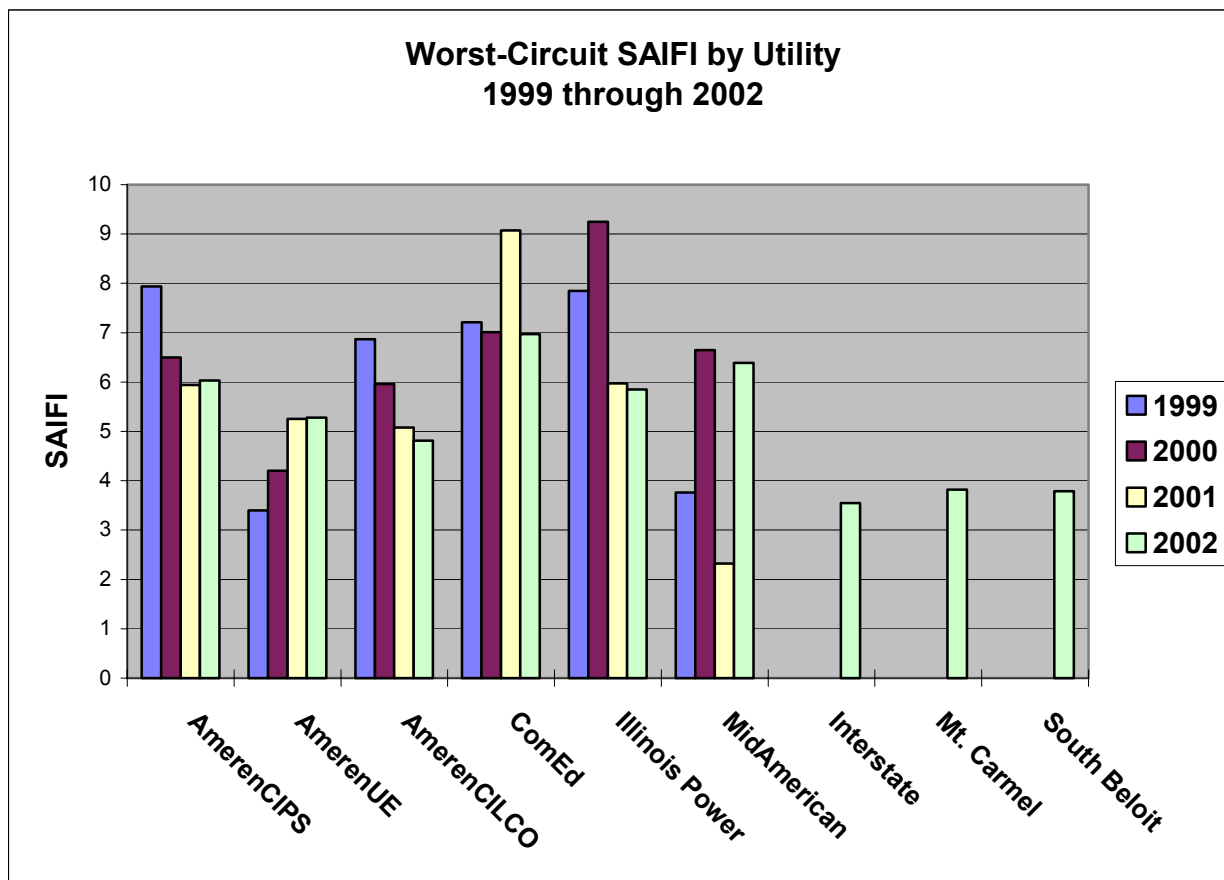
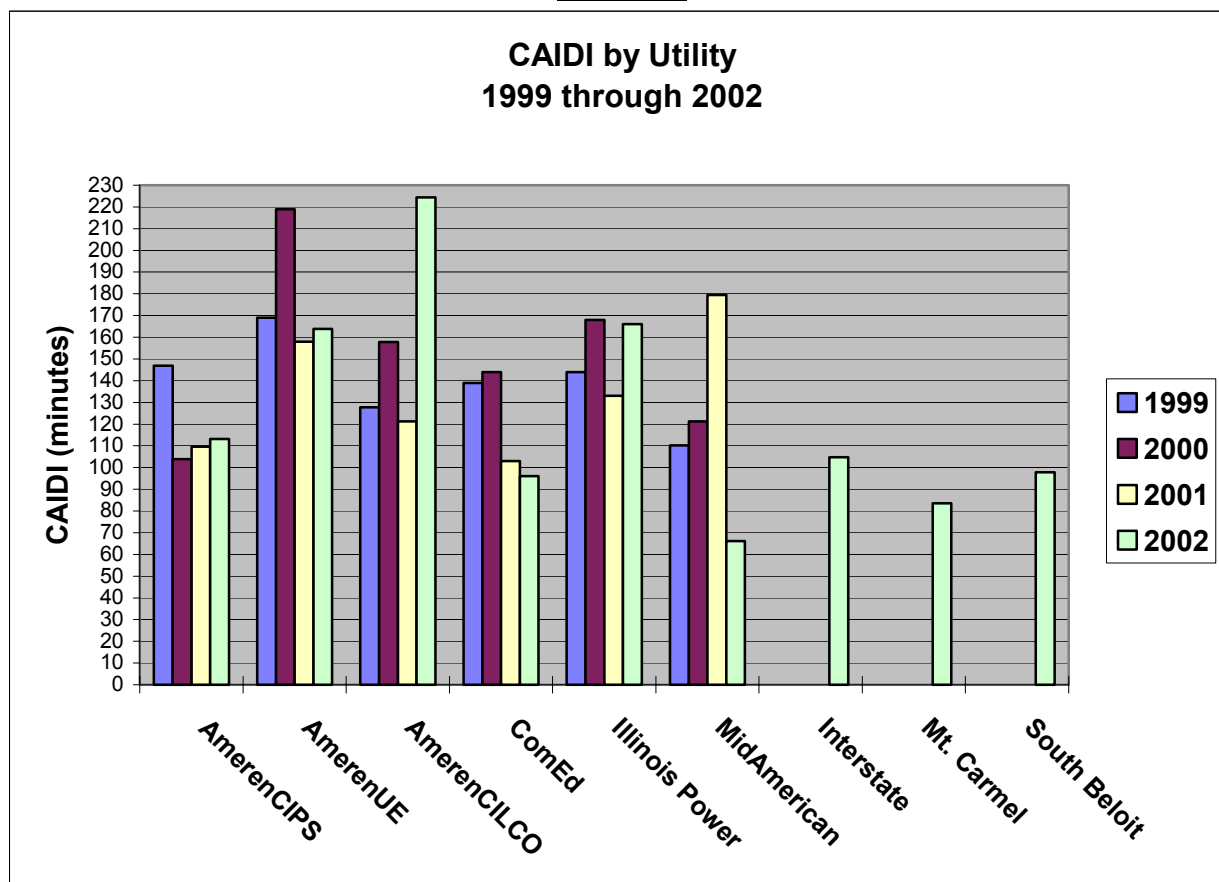


Figure 17 shows a comparison of CAIDI values reported by the Illinois utilities for years 1999 through 2002. Mt. Carmel's reported overall 2002 CAIDI performance of 83.54 minutes compared very favorably to the other Illinois utilities, bettered only by MidAmerican's reported overall CAIDI of 66 minutes.

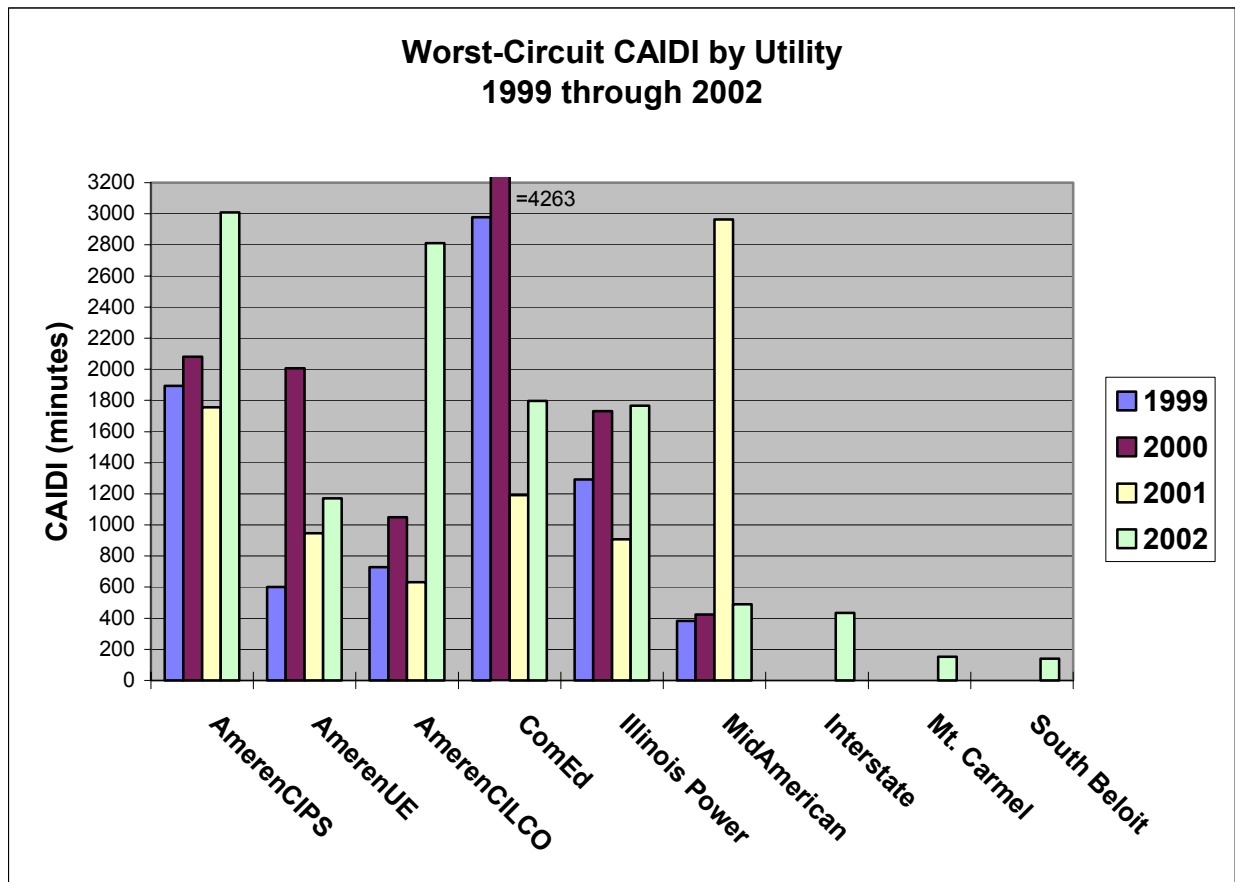
Figure17



As stated previously, since 2002 was the first year of reliability reporting for Mt. Carmel, it has not yet established a trend of its own reported reliability performance. It is notable, however, that while there is much room for improvement in its overall frequency of interruptions index (SAIFI), Mt. Carmel performed much better in 2002 in terms of its interruptions duration index (CAIDI).

Figure 18 shows a comparison of CAIDI values for each company's single worst performing circuit as reported by the Illinois utilities for years 1999 through 2002. As with its worst-circuit SAIFI performance, Mt. Carmel's reported worst-circuit CAIDI performance for 2002 compares very favorably with the other utilities. At 152.7 minutes, Mt. Carmel's worst-circuit CAIDI was the second best of the nine reporting utilities for 2002, bettered only by South Beloit at 140.6 minutes.

Figure18



9. Mt. Carmel's Plan to Maintain or Improve Reliability

Plans described in Mt. Carmel's annual reliability report to maintain or improve reliability include:

- Relocate a line recloser and transfer a portion of Circuit #32000 to Circuit #21000 (completed in February 2003).
- Install sectionalizing devices at two locations in Circuit #21000 to aid in interruption control and provide better back feed capabilities (completed in May 2003).
- Investigate the feasibility of relocating a voltage regulator in the Friendsville area for better voltage control during peak loading seasons and the proper placement of a capacitor bank in Circuit #21000.

- Transfer approximately half the area serviced by Circuit #22000 (Mt. Carmel's 2002 worst performing circuit) to Circuit #21000 (completed in April 2003).
- Investigate the need for a new recloser and more sectionalizing devices in Circuit #22000.
- Reconstruct a portion of Circuit #31000 with underground facilities in front of the properties for better accessibility (scheduled for completion in 2005).
- Relocate a recloser and reconfigure an existing sectionalizing switch arrangement in Circuit #31000 to minimize outage durations to customers downstream (scheduled for completion in summer 2003).
- Reconfigure the line switching scheme on Circuit #32000 to enable shedding a portion of the circuit to Circuit #17000 (scheduled for completion in fall 2003).
- Reconstruct a circuit tie between Circuits #33000 and #32000 which was removed due to a road widening project in 2001 (scheduled for completion in fall 2003).
- Investigate implementing a plan to begin circuit-wide tree trimming with a projected return schedule of three years.
- Install animal guards at new transformer locations and on existing facilities as animal related problems are encountered.
- Study circuits with high numbers of outages and, where applicable, add sectionalizing devices, relocate or add line reclosers, and switch portions to another distribution circuit.
- Study the feasibility of rebuilding or relocating portions of circuits where access to distribution facilities is limited.

Mt. Carmel reported the following budgeted capital and O&M amounts for the next three years:

	<u>2003</u>	<u>2004</u>	<u>2005</u>
Transmission Capital	\$70,000	\$250,000	\$75,000
Transmission Operations & Maintenance	\$996,779	\$697,086	\$715,090
Distribution Capital	\$179,050	\$1,067,582	\$114,179
Distribution Operations & Maintenance	\$730,523	\$761,571	\$793,937
Totals:	\$1,976,353	\$2,776,239	\$1,698,207

Included in the above budget amounts are the following specific projects:

- Construction of a four-mile distribution circuit out of the South Division St. Substation (\$93,000 in Distribution Capital for 2003).
- Rebuild of a 138/69 kV substation transformer which failed in early 2003 (\$300,000 in Transmission O&M for 2003).
- Construction of a new distribution substation (\$1,030,000 in Distribution Capital for 2004).
- Materials associated with the construction of a 138/69 kV substation in connection with the distribution substation listed above (\$133,000 in Transmission Capital for 2004).
- Relocation of existing facilities in the Oressa Heights Subdivision (\$112,811 in Distribution Capital for 2003 through 2005).

10. Potential Reliability Problems and Risks

Inadequate tree trimming is perhaps the biggest single risk to electric service reliability at Mt. Carmel Public Utility Company. While Mt. Carmel listed tree problems as the cause for only 11.29% of the service interruption events in 2002, many of the interruptions attributed to weather (26.21%) may very well have been tree related. During the field inspection of Mt. Carmel's 2002 worst performing circuit and two other circuits in May 2003, Staff noted that trees were in conflict with Mt. Carmel's primary at many locations throughout the circuits inspected. Mt. Carmel does not currently trim trees on a circuit basis, but reported that it is "investigating implementing a plan to begin circuit wide trimming with a projected return schedule of three years." Mt. Carmel should follow through with the implementation of such a plan, including written documentation of the policy, a written schedule for trimming each of its circuits, and records to document when tree trimming was last completed on each circuit. The tree trimming policy should include a requirement that trees be trimmed such that, as a minimum, they not make contact with Mt. Carmel's electric facilities before crews return to trim them again.

As discussed in Section 7 of this report, Mt. Carmel needs to do a better job of identifying and recording the true causes of some of its customer interruptions. Mt. Carmel should investigate the accuracy of the causes reported for system outages and customer interruptions to better understand what actions need to be taken to improve reliability. The importance of proper identification of root causes of service interruptions should be included in a written procedure for all to follow, and all involved personnel should be trained to take the time and effort required to identify and record the true causes of interruptions as they occur.

11. Review of Mt. Carmel's Implementation Plan for the Previous Reporting Period

Because this is the first year Mt. Carmel was required to file an Annual Reliability Report to the Commission, it had no previously filed implementation plan to review.

12. Summary of Recommendations

- A) Mt. Carmel should implement the tree trimming plan it is investigating, "to begin circuit wide tree trimming with a projected return schedule of three years." The plan should include written documentation of its tree trimming policy, a written schedule for trimming each of its circuits, and records to document when tree trimming was last completed on each circuit. The tree trimming policy should include a requirement that trees be trimmed such that, as a minimum, they not make contact with Mt. Carmel's electric facilities before crews return to trim them again.
- B) Mt. Carmel should investigate the accuracy of the causes reported for system outages and customer interruptions to better understand what actions need to be taken to improve reliability. The importance of proper identification of root causes of service interruptions should be included in a written procedure for all to follow, and all involved personnel should be trained to take the time and effort required to identify and record the true causes of interruptions as they occur.
- C) Mt. Carmel should investigate all of the problems noted during Staff's inspections of worst-performing circuits (see Attachments A, B, and C) and take appropriate remedial actions addressing any problems on those circuits, whether or not noted by Staff, which can significantly affect service reliability or public safety.
- D) Mt. Carmel should perform field inspections of all circuits on a regular basis and correct the problems found which can significantly affect reliability or public safety.
- E) Mt. Carmel should review its basis for categorizing so few service interruptions as controllable. Staff's opinion is that most service interruptions are controllable, and that whether or not it is cost effective to control them is a separate issue to be considered.
- F) Mt. Carmel should indicate in its future annual reliability reports the cause categories of the interruptions of its worst performing circuit(s) and its plan to address those specific problems.